Hensley, Dave

From: Mike Major <mmajor@powerfulcompliance.com>
Sent: Wednesday, February 20, 2019 1:18 PM
To: Hensley, Dave; Jason Osbahr
Cc: Guerry, William M.
Subject: FW: BOE Proposed Corrective Actions for Bypass Release Point and Biodigester
Attachments: ATT00001.htm; 190219_ALOHA_Gaussian_CH4_Direct_Release.pdf; 190219_ALOHA_IGL_CH4 _Direct_Release_CH4.pdf; ATT00002.htm; 190219_Big_Ox_Siouxland_Modeling_Parameters.xlsx; ATT00003.htm; 190219_Piping Concept Modification.pdf; ATT00004.htm

Dave,
I hope you are doing great. Please see the update email below to your colleagues which addresses the modelling you are working through with Jason.

Please let me know, how I can be helpful.

Best,
Mike

From: Guerry, William M. <WGuerry@KelleyDrye.com>
Sent: Wednesday, February 20, 2019 12:13 PM
To: HertzWu.Sara@epa.gov; weekley.erin@epa.gov; Susan Ugai <susan.ugai@nebraska.gov>
Cc: Mike Major <mmajor@powerfulcompliance.com>
Subject: BOE Proposed Corrective Actions for Bypass Release Point and Biodigester

Dear Sara and Susan:

On behalf of BOE, thank you for hosting and providing constructive input and direction on Thursday's conference call. Through this email, we are providing you with an update and seek further input and direction from EPA and DEQ, given the tight timeframes.

1. Jason Osbahr (BOE) has had a series of very helpful, productive conference calls with Dave Hensley regarding Bypass release point placement, modelling and results. BOE commissioned HDR to update and perform ALOHA modelling in two methodologies – Gaussian and the much more representative ideal gas law ("IGL") – for the proposed 25 ft elevation discharge pipe. Even though the Gaussian model determines a Total Release Amount (31,919 lbs) an order of magnitude greater than the IGL model (2,878 lbs), the Guassian model determines that LOC is not exceeded. In fact, the 10% of LEL under the Gaussian model is at 113 yards.

The more accurate, IGL determines that ground level concentrations do not arise to even 10% of LEL.

The Gaussian and IGL models, inputs and reports are attached. Please see:

190219_Big_Ox_Siouxland_Modeling_Parameters.xlsx

190219_ALOHA_IGL_CH4_Direct_Release_CH4.pdf

190219_ALOHA_Gaussian_CH4_Direct_Release.pdf

190219_Weather_data.pdf

Matching the modeled ALOHA conditions, BOE will install 2" piping to a 25' elevation release point including:

- Providing EPA and DEQ a rough piping layout for concept review. Please see: *190219_Piping Concept Modification.pdf*
- BOE will build (offsite) a piping assembly to minimize hot work on the gas skid site.
- BOE will develop a specific safety plan to address the modification.

2. Jason has also been discussing with David the proposed operational and monitoring improvements to the biodigester, based on the draft Compliance Plan that we submitted. We will make further improvements to that draft digester compliance plan based on any additional input that we obtain from Dave Hensley or the rest of your teams.

3. We plan to submit this week a comprehensive response to the follow-up questions to the Root Cause Analysis that BOE submitted last fall. BOE is expanding the response to address the overflow that occurred in January.

4. This week, we will provide you with a projected timeline schedule for removing all the stored centrifuge sludge and feedstock to off-site farms and to the Gill or Butler landfill, based on the pending approvals we discussed.

5. This week we will submit to you the schedule for BOE to conduct within 30 days:
    a. Performance testing of the entire facility, including the Clean Up Skid in process.
    b. PRV maintenance, calibration and re-certification
    c. Flow meter(s) maintenance, calibration and re-certification
    d. Flame arrestor maintenance, calibration and re-certification

6. We are working on proposed improvements to control and reduce H2S and odor emissions from the Receiving Area, including more robust feedstock evaluations and management, as well as evaluating odor scrubber implementation. BOE will submit a proposed feedstock and potential improved ventilation system for EPA and DEQ review.

7. As we previously discussed, BOE requests to improve ambient monitoring by replacing the 4 roof mounted monitors with one additional permanent fenceline monitor. The current roof mounted monitors suffer thermal and environmental failures which such a permanent fenceline monitor will survive. The additional permanent fenceline monitor will enable comprehensive, real-time monitoring of the facility compliance and impact on the neighboring areas. The proposed Receiving Area scrubber/ventilation improvement will reduce fugitive H2S releasee.

8. BOE plans to pursue a permanent, impermeable containment structure for any eventual on-site storage.